

Modularized Solutions: Liquefaction Technology and Equipment



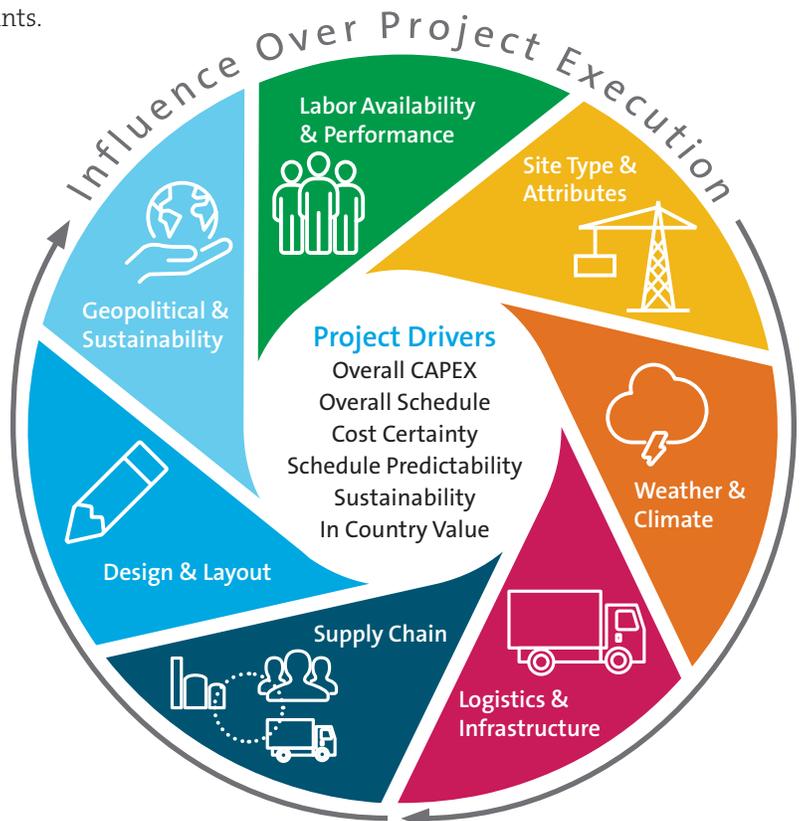
The world leader in LNG technology and equipment brings vast modularized capability and expertise to the LNG market.



Liquefaction Equipment incorporating modularized execution strategies provides alternative means of managing project risks, costs, and schedule.

The conventional method of providing liquefaction equipment is undergoing a transformation with the need to find innovative approaches to decrease the requirement for on-site labor, improve safety by minimizing or eliminating on-site scaffolding, reduce the construction costs, and increase the schedule certainty of the proposed project. Air Products is at the forefront of this shift, offering a comprehensive range of solutions to fit this need. Our commitment to excellence and expertise in liquefaction and process technologies are enabling us to offer a range of solutions that are revolutionizing the way LNG facilities are built and operated. That's why choosing the most experienced provider with the best performing LNG process technology and equipment is paramount to your project's success. Air Products is the world's leader, having more than 50 years of

experience in supplying customers with the most proven LNG technology, equipment, and services for all size LNG plants.



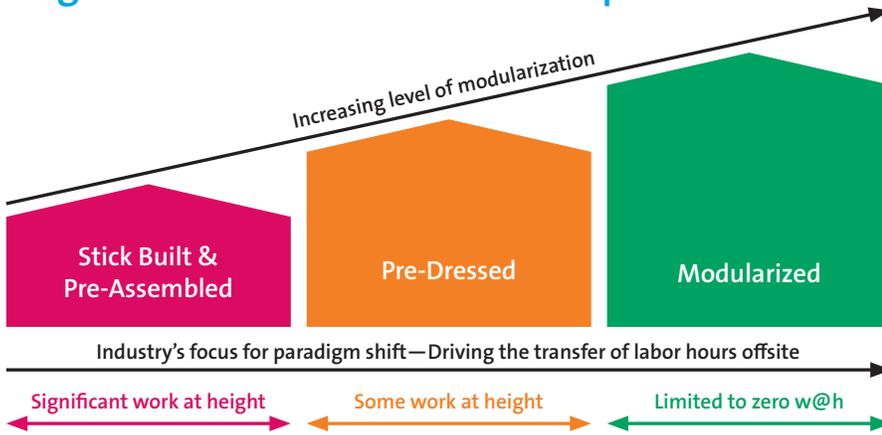
Options to meet your facility's needs, from stick built to fully modularized

Air Products' engineering and manufacturing teams bring the technical expertise to collaborate with owners, operators, engineering, and construction contractors on a variety of execution strategies to design and fabricate the liquefier heat exchanger systems to meet specific construction and modularization requirements. Such strategies have ranged from liquefier coil wound heat exchanger (CWHE) units being partially pre-dressed, modularized in a manufacturing yard or at the project site while other equipment is being fabricated in the manufacturing shop.



For the Floating LNG (FLNG) facility, ENI Coral South, the CWHE equipment was installed into modules at the shipyard utilizing Air Products' dual mixed refrigerant (AP-DMR™) LNG Process.

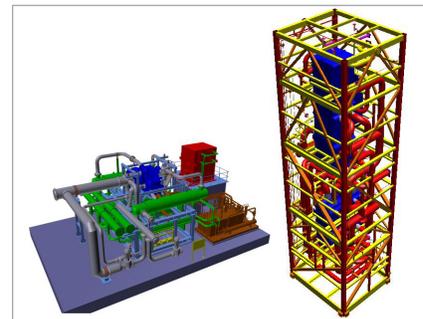
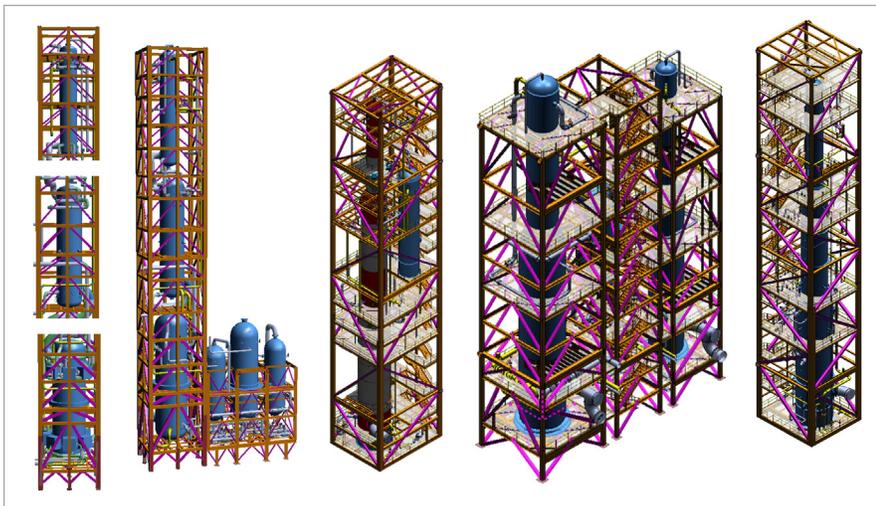
Degrees of modularization for liquefaction



Complete Modules

- Includes all platforms, all piping and electrical, delivered pre-commissioned resulting in low-level hookups at site only and no work at heights
- Module can be full framed with stairs and platforms or fully dressed with ladders
- Options can be provided for projects with smaller cargo envelopes, or other transportation size or lifting limitations, such as smaller modules which may require some interconnections to be made at site

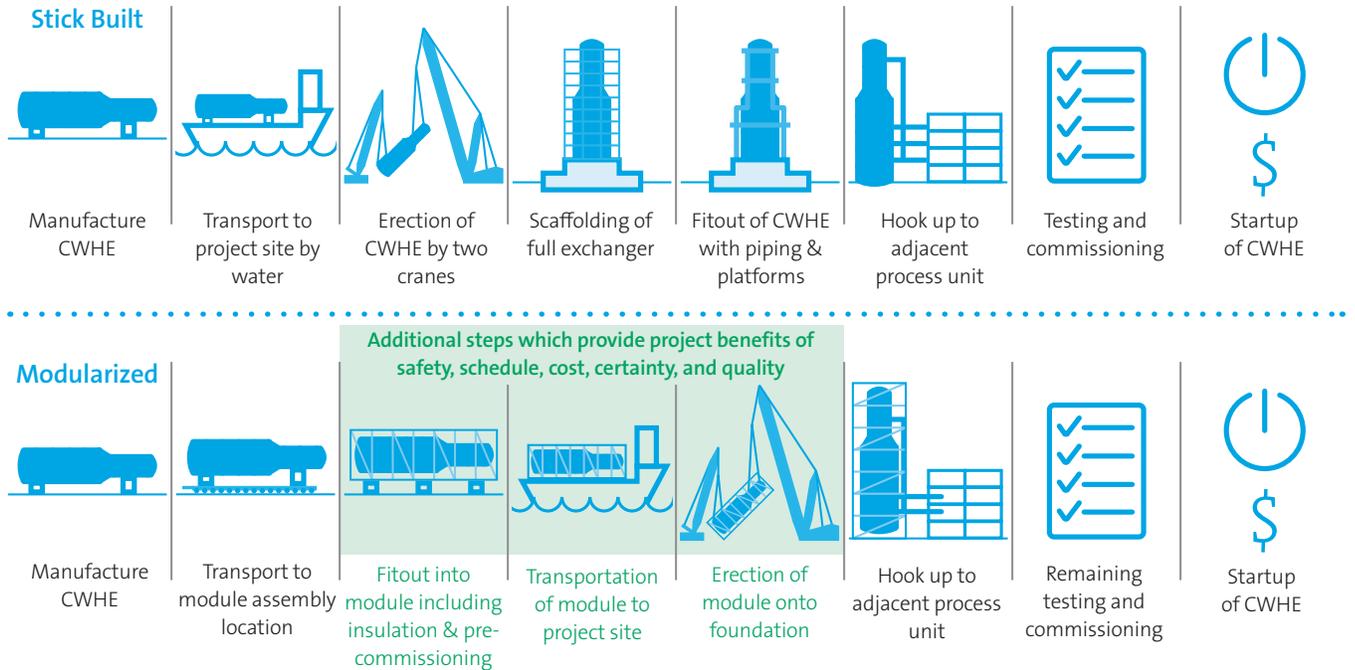
Air Products' broad capabilities and experience ranging from small to large scale



AP-200T™ and AP-400T™ for small LNG plant capacities at nominal 200-400 TPD.

Modularized solutions for mid- to large-scale LNG facilities with proven process technology and equipment

Safe. Sustainable. Repeatable.



Benefits & Features:

- Drive reduction in owners' overall project schedule
- Increase schedule certainty required on the CWHE
- Minimized field work, especially work at height
- Safe and reliable CWHEs
- Fully installed access platforms, piping, valves, and instrumentation
- Full operational access via stairs with options for secondary egress
- Insulation installation at shop prior to field erection
- E&I installation at module shop for simplified hookup at site
- Efficiently laid out for optimal CWHE, piping and structural design
- Coordination of exchanger piping tie-ins resulting in simplified onsite hookups

State of the art manufacturing

Manufacturing experience designing over 2000 cryogenic plants enables us to efficiently design the world's most complex frame, piping, and exchanger systems and fabricate proprietary equipment in our state of the art manufacturing facilities.



Caojing, Shanghai China



Port Manatee, Florida, USA

Choosing the best equipment and technology in the LNG industry

Air Products has contributed to the success of more LNG operations than any other company. Our LNG engineering and manufacturing team has been involved in the majority of LNG projects deployed around the world. As a result, our technology and equipment is successfully integrated into most of the LNG traded globally today. Air Products' proprietary cryogenic heat exchanger technology and equipment has industry recognition for being the most proven and reliable units built, with the utmost quality.

Unrivaled LNG experience

No other company has over 50 years of experience in LNG engineering and process design. Only Air Products has a proven track record of having successfully commissioned over 120 LNG trains, with many in operation for more than 50 years, all of which successfully passed their performance test the first time. Air Products' in-house team of highly-skilled LNG specialists developed our proprietary liquefaction processes. We have the unique ability to efficiently integrate the liquefaction process design and critical liquefaction equipment that leads to an optimization of performance, costs, operability and reliability that has become the benchmark of the LNG industry. Air Products is committed to helping our customers achieve their bottom-line objectives, every step of the way.

Safety

Safety is our #1 priority. Air Products' performance is consistently among the leaders in our industry, thanks to our teams' efforts around the world to prevent injuries and send people home as safely as they arrived at work.

Air Products is also committed to reducing the environmental impact by consuming fewer resources and lowering emissions. We've set aggressive reduction goals in energy, greenhouse gases, water, waste, emissions, and fleet emissions.

About Air Products

Air Products is a world leading industrial gases company celebrating over 80 years of operation. The company's core industrial gases business provides atmospheric and process gases and related equipment to manufacturing markets, including refining and petrochemical, metals, electronics, and food and beverage. Air Products is also the world's leading supplier of liquefied natural gas process technology and equipment.

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